

NGDA Dataset Report

Official NGDA Title: Airborne Gravity (GRAV-D)

Metadata Record Title: Airborne Gravity: NGS' Gravity Data for the US and Territories (2008-2022) - National Geospatial Data Asset (NGDA) Airborne Gravity (GRAV-D)

A-16 NGDA Theme: Geodetic Control

Executive NGDA Theme Champion(s):

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Metadata:

Registration Status: Complete

Registered on 10/31/2014

GeoPlatform Link*: <http://www.geoplatform.gov/node/243/5bc20244-d178-40e7-a08d-43d0232c9e2a>

Data.gov Metadata Link*: <http://catalog.data.gov/harvest/object/7d6ed03b-cec2-4376-bedc-0b668393cfa2/html>

*If the metadata has been updated and reharvested after publication of this report, the link may no longer be valid. The dataset may be searched for manually in Data.gov or GeoPlatform.gov.

NGDA Lifecycle Maturity Assessment (LMA) Report

Time Frame:

Baseline assessment responses include the entire GRAV-D project and all airborne gravity data collection by NOAA, from 2006 to 2015.

LMA Submission:

Status: Complete

Date: 9/23/2015

Extension Requested: No

LMA Reviewer(s):

Supervisor: Did not review

Theme Lead: Neil Weston

Executive Champion: Did not review

SAOGI*: Did not review

Other: Did not review

LMA Verifier:

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Attachments:

To get access to any attachments referenced in the report, email the LMA Help Desk at NGDA_LMA_help@fgdc.gov. Please use the subject "Dataset Report Attachment(s)" and indicate the associated official NGDA title.

*Senior Agency Official for Geospatial Information (SAOGI)

Lifecycle Maturity Assessment (LMA) Summary

Overall Maturity:

Mature; Consistent

General Questions: 81%

Mature; Consistent

Stage 4 - Access: 100%

Optimized; Established

Stage 1 - Define/Plan: 95%

Optimized; Established

Stage 5 - Maintain: 82%

Mature; Consistent

Stage 2 - Inventory/Evaluate: 100%

Optimized; Established

Stage 6 - Use/Evaluate: 77%

Mature; Consistent

Stage 3 - Obtain: 87%

Mature; Consistent

Stage 7 - Archive: 66%

Managed; Predictable

NGDA Dataset Maturity Definitions:

How To Calculate Maturity: https://www.geoplatform.gov/sites/default/files/How_to_Calculate_Maturity.pdf

Maturity	Maturity Characteristics for All Lifecycle Stages
Optimized; Established Rank = 5	Dataset meets virtually all business needs of all users. The dataset is considered authoritative by owners and secondary users. It is curated across all stages of the approved lifecycle. Future needs are defined on a regular basis and resources for addressing both current and future business requirements are available.
Mature; Consistent Rank = 4	Dataset meets all the business needs of the primary owner and most of the secondary users. The dataset is curated and used as authoritative by the primary owner. Dataset is used widely by secondary users actively engaged in sustaining the dataset. Future needs are identified and steps are planned to address these. All stages are supported and reviewed on a recurring basis. The dataset is well managed in relation to the approved lifecycle.
Managed; Predictable Rank = 3	Dataset meets a significant number of the business needs of the primary owner and is widely used as an authoritative resource by secondary users. Benchmark activities are occurring in at least four of the approved lifecycle stages. Management practices in relation to the approved lifecycle is moderate but consistent. Dataset is integrating changing business requirements in lifecycle stages impacting overall maturity.
Transition; Transformation Rank = 2	Dataset meets business needs of the primary owner and has moderate use by secondary users. Benchmark activities are occurring in at least three stages. Efforts to integrate funding, include partners, and obtain data are not supported in a sustained manner. Management practices in relation to the stages of the approved lifecycle is limited.
Planned; Initial Development Rank = 1	Dataset limited in meeting business needs of the primary owner. Benchmark activities in the approved lifecycle are just starting to consider secondary uses, partnerships are forming to support additional dataset uses. Dataset development is in a very early stage. Minimal or limited management against the benchmarks in the approved lifecycle.
No Activity Rank = no activity	Dataset meets project or local business needs of the primary owner, secondary or additional uses or users were not considered, not recognized as an authoritative data or is part of a similar dataset. Not managed to any of the benchmarks in the approved lifecycle.

General Questions for All Stages

1) Is there a recurring process to obtain funding for all lifecycle stages of this dataset?

Answer: Funding support is part of agency budget on a recurring basis, funding is consistent and tied to business processes, and supports all lifecycle stages.

Justification Comment:

Attachment(s): 0

GRAV-D has an annual budget that is provided annually in the NOAA National Geodetic Survey budget.

2) Is there a process in place to ensure that open government and transparency guidelines are followed in all lifecycle stages for this dataset?

Answer: Process established, significant portions of the documentation is complete.

Justification Comment:

Attachment(s): 0

GRAV-D shows on the webpage (<http://www.ngs.noaa.gov/GRAV-D/>) all areas of planned collection, current collection, and completed data sets. Updates on the project are provided at a variety of conferences and meetings.

3) Are there processes and tools in place so that staff are sufficiently knowledgeable to ensure a continuity of the dataset for all stages of the lifecycle, especially during staffing transitions?

Answer: Processes and tools to ensure dataset continuity are defined and beginning to be implemented.

Justification Comment:

Attachment(s): 0

Documentation provides data collection and processing methods. http://www.ngs.noaa.gov/GRAV-D/pubs/GRAVD_Field_Operations_Handbook.pdf

STAGE 1 - Define/Plan

4) Are user and business requirements defined and formalized?

Answer: A recurring process exists for gathering partners/ stakeholders requirements is in place and is in the beginning stages of implementation.

Justification Comment:

Attachment(s): 0

The project plan defines the business need and the primary user (NOAA National Geodetic Survey Geoid Team) is consulted monthly. http://www.ngs.noaa.gov/GRAV-D/pubs/GRAV-D_v2007_12_19.pdf

5) How are partners/stakeholders involved in the requirements collection process?

Answer: A recurring process is in place, including defining new partner and stakeholder business needs as they arise, and is fully implemented.

Justification Comment:

Attachment(s): 0

The primary stakeholders for this data set is internal and they were consulted with the development of the project plan. http://www.ngs.noaa.gov/GRAV-D/pubs/GRAV-D_v2007_12_19.pdf

6) Is there a quality assurance process for the dataset?

Answer: Quality assurance published as appropriate with respect sensitivity requirements.

Justification Comment:

Attachment(s): 0

Quality is evaluated during field collection and during final processing. The process is documented in the GRAV-D Handbook and results published in Block Manuals for each data release.

http://www.ngs.noaa.gov/GRAV-D/pubs/GRAVD_Field_Operations_Handbook.pdf,

http://www.ngs.noaa.gov/GRAV-D/data_products.shtml

7) Is there a process to evaluate the sensitivity, privacy, and confidentiality of this dataset?

Answer: Sensitivity, privacy, and confidentiality evaluations fully implemented, reviewed and updated

on a recurring basis.

Justification Comment:

Attachment(s): 0

There are no sensitivity, privacy, or confidentiality concerns with this dataset.

8) Are defined data standards used in collecting, processing, and/or rendering the data?

Answer: Standards fully implemented documented and published as appropriate.

Justification Comment:

Attachment(s): 0

Data standards for field collection, processing, and publication are documented. Field collection standards are published in the Operations Handbook: http://www.ngs.noaa.gov/GRAVD/pubs/GRAVD_Field_Operations_Handbook.pdf

STAGE 2 - Inventory/Evaluate

9) Is there a process for determining if data necessary to meet requirements already exist from other sources (either within or outside the agency) before collecting or acquiring new data?

Answer: Process for determining appropriate data is being reused fully implemented, reviewed, and updated on a regular basis.

Justification Comment:

Attachment(s): 0

This is the first, and will likely be the only, complete airborne gravity data collection that covers the entire U.S. and territories in a consistent fashion. No other known groups collect airborne gravity data in the U.S. and territories that meets the requirements for defining a geoid.

STAGE 3 - Obtain

10) Is there a process for obtaining data in relation to this dataset?

Answer: Process is fully implemented, reviewed and updated on a regular basis.

Justification Comment:

Attachment(s): 0

Data is collected regularly throughout the year and will continue through 2022. There is a published field operations handbook that describes all field collection procedures. <http://www.ngs.noaa.gov/GRAVD/pubs.shtml>

11) Is the metadata in a FGDC endorsed geospatial metadata standard?

Answer: Metadata is available in a format endorsed by the FGDC, it fully describes the dataset and provides all the information required to make the dataset discoverable, accessible, and usable.

Justification Comment:

Attachment(s): 0

All data releases are accompanied by FGDC compliant metadata in CSDGM format that is produced and published through MermAID, which makes it discoverable, accessible, and usable through online government portals. Metadata available with data downloads at http://www.ngs.noaa.gov/GRAVD/data_products.shtml.

12) How complete is the geographic coverage as defined in the requirements for the dataset?

Part 1 Answer: Business requirements for cyclic updates identified and a process is in place.

Part 2 Answer: Data set is roughly 50% of the geographic coverage is presently complete per current requirement.

Justification Comment:

Attachment(s): 0

GRAV-D started collection in 2008 and is on track to meet the goal of complete coverage by 2022. A GPRA metric tracks progress and it is currently at 45% complete. Percent complete is tracked monthly through a standard, written procedure (attached). Official GPRA reports are required quarterly. The coverage is the entire U.S. and its territories (15.56 million square kilometers) with 10 kilometer data line spacing.

STAGE 4 - Access

13) Do you have a process for providing users access to the data in an open digital machine readable format?

Answer: User access process is fully implemented, data is available, process is reviewed and updated on a recurring basis.

Justification Comment:

Attachment(s): 0

All processed GRAV-D data is available on the website for download by the public:
http://www.ngs.noaa.gov/GRAV-D/data_products.shtml.

STAGE 5 - Maintain

14) Is there a maintenance process for updating and storing the dataset?

Answer: Dataset maintenance process is fully implemented and processes are reviewed and periodically updated.

Justification Comment:

Attachment(s): 0

There is a data maintenance plan that describes the process for storing the dataset. The long term aspect of updating the dataset is not part of the current phase and will be implemented once a complete dataset is acquired in 2022.

15) Is there an error correction process as part of dataset maintenance?

Answer: Error correction process established.

Justification Comment:

Attachment(s): 0

There are established procedures for checking the data in the field, verifying files are all present when data are ingested at the offices, and a final data check during final processing and publication in the office.

STAGE 6 - Use/Evaluate

16) Is there a process to determine if the dataset meets user needs?

Answer: Process is fully implemented and repeated on a recurring basis.

Justification Comment:

Attachment(s): 0

The primary customer for the airborne gravity data is internal, the NGS Geoid team. Meetings are held on a monthly basis to confirm that the data is meeting their needs. Data are also quality controlled in the field and during final processing based on requirements for geoid use.

17) Is there a process to provide users information on how to access and properly use the dataset?

Answer: Process is fully implemented supporting access and proper use, process is reviewed on a recurring basis.

Justification Comment:

Attachment(s): 0

User manuals are published with every dataset that provides information on access and proper use as well as all information about how the data was collected and processed. These are available with the data download at: http://www.ngs.noaa.gov/GRAV-D/data_products.shtml

18) Are the business processes and management practices assessed to meet changing technology?

Answer: Assessment process is being developed to take advantage of changing technology.

Justification Comment:

Attachment(s): 0

This is currently done on an ad hoc basis based on conversations with other professionals in the field through conferences or meetings. Since it is a very small community this has been sufficient to stay informed of changing technology even though there is no formal process in place to evaluate this.

STAGE 7 - Archive

19) Is there an archiving process for the dataset?

Answer: Archival and/or processes are in early implementation.

Justification Comment:

Attachment(s): 0

A data management plan describes initial archiving process while the data are in collection and processing stages. The final permanent archiving step is under development.